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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/576,554 | 04/19/2006 | Eduard Ferdinand Stikvoort | NL03 1244 US1 | 3883 |

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| EXAMINER | |
|---|---|
| LAM, TUAN THIEU | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2816 | |

| NOTIFICATION DATE | DELIVERY MODE |
|---|---|
| 04/02/2009 | ELECTRONIC |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ip.department.us@nxp.com

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/576,554 | STIKVOORT ET AL. | |
| | Examiner | Art Unit | |
| | Tuan Lam | 2816 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *27 January 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-4* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 April 2006* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *1/27/2009*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

This is a response to the amendment filed 1/27/2009. Claims 1-4 are under examination.

### *Drawings*

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the limitations of "inverter stage of the divider" in claim 2 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 2 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In this instant, the recitation of "an inverter stage of the divider" in claim 2 was not described in the specification as the time the application was filed. Figure 3 reads on the claimed subject matters. However, figure 3 shows only two flip flop circuits and does not have a corresponding inverter stage as recited in claim 2.

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by applicant's cited prior art figure 2.

Applicant's cited prior art figure 2 shows a frequency divider comprising a first flip flop without stacked transistors (M1-M4) having a first clock input for receiving a clock signal (CL/), the first flip flop further comprising a first set input (gate electrode of M3) and a first non-inverted output (Q1), and a second flip flop without stacked transistors

(M1'-M4', M5, M6) having a second clock input for receiving a second clock signal (gate electrode of M'4 receiving CL), a second set input (gate electrode of M'3) coupled to the first non-inverted output (Q), a second non-inverted output (Q2), a second inverted output (Q4 is the inverted version of Q2), the second inverted output of the second flip flop being coupled to the first set input of the first flip flop (Q4 is coupled to the first set input of the first flip flop) as called for in claim 1.

Regarding claim 2, the period of the clock signal (CL) can be chosen with the same order of magnitude as a delay through an inverter stage (M5 and the resistor connected to M5) of the divider.

Regarding claims 3-4, the controllable switch is seen as transistors M5 and the resistor connected to M5, the transistor M5 coupled to the second inverted output of the second flip flop (source/drain electrode of the transistor M'1).

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murray (EP 270191) in view of Edwards (US 2005 0156643), both prior art of record.

Figure 5 of Murray shows a frequency divider comprising a first flip flop (1) having a first clock input (C) and a first set input (D), a second flip flop (2) having a second clock input (C ) for receiving a second clock signal (output of inverter 5), second set input (D), second inverted output (Q/) and second non-inverted output (Q), the second inverted output being fed back to the set input of the first flip flop.

Murray's figure 5 does not show the first and second flip flop circuits without stacked transistors as called for in claim 1.

Figure 1 of Edwards shows a flip flop circuit without stacked transistors having minimal number of transistors consumption a least amount of power. Therefore, it would have been obvious to person skilled in the art at the time the invention was made to implement Murray's first and second flip flop circuits with the flip flop circuits of Edwards for the purpose of minimizing power consumption.

Regarding claim 2, wherein a period of the second clock signal can be chosen at the same order of magnitude as a delay through the second inverted output of the divider.

***Response to Arguments***

3. Applicant's arguments filed 1/27/2009 have been fully considered but they are not persuasive. Applicant argues that applicant's cited prior art figure 2 shows stacked transistors flip flop is not persuasive. Applicant's cited prior art figure 2 shows flip flop circuits with no transistors stacked on top of each other, thus, the limitation of without stacked transistor is fully met.

Applicant argues that none of the Murray and Edwards references discloses flip flop circuits without stacked transistors or the second inverted output of the second flip flop is being

coupled to the first set input of the flip flop is not persuasive. Figure 1 of Edwards shows a flip flop circuit without stacked transistors having minimal number of transistors consumption a least amount of power. Therefore, it would have been obvious to person skilled in the art at the time the invention was made to implement Murray's first and second flip flop circuits with the flip flop circuits of Edwards for the purpose of minimizing power consumption.

Regarding the limitation of the second inverted output of the second flip flop is being coupled to the first set input of the flip flop, figure 5 of Murray shows a frequency divider comprising a first flip flop (1) having a first clock input (C) and a first set input (D), a second flip flop (2) having a second clock input (C ) for receiving a second clock signal (output of inverter 5), second set input (D), second inverted output (Q/) and second non-inverted output (Q), the second inverted output being fed back to the set input of the first flip flop. Therefore, the rejection is deemed proper.

***Conclusion***

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan Lam whose telephone number is (571)272-1744. The examiner can normally be reached on Monday to Friday (7:30 am to 6:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lincoln Donovan can be reached on 571-272-1988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tuan Lam/
Primary Examiner, Art Unit 2816

3/24/2009